

2.6 Wetland Area at Risk

Wetland areas within the Estero Bay Watershed are subjected to the rapid growth and urbanization within the region, which create the potential for not only changes in runoff and nutrient and sediment loading, but also provides a potential for wetland losses. In an effort to determine the magnitude of the wetland areas at risk within each tertiary basin, 1998 GIS coverages of Development of Regional Impacts (DRIs) from the South West Florida Regional Planning Council, important wetlands as determined from wetland species “hot spot” data in 1994 GIS coverages from Florida Game and Fresh Water Fish Commission, and conservation areas as determined from 1998 GIS coverages from the South West Florida Regional Planning Council, were combined.

Combining the coverages for DRIs, important wetlands, and conservation areas provided an estimate of the area of critical wetlands within each tertiary basin which were not included within DRIs or conservation areas, defined for our purposes as wetland areas at risk. The tertiary basins were assigned relative ranks according to estimated acreages of wetland areas at risk. This analysis resulted in the priority basins presented in Table 2-11; Table 2-12 presents the area-weighted relative ranks for wetland areas at risk. Figure 2-11 presents the results of the wetland area at risk ranking of the 62 tertiary basins in the study area grouped as described previously into high, medium, and low impact basins. Figure 2-12 presents the area-weighted results of the wetland area at risk ranking of the 62 tertiary basins in the study area.

From this analysis, it is seen that the relatively large tertiary basins contain the greatest acreages of wetland areas at risk, with four of the top five high priority basins containing more than 15,000 acres, and the top five high priority basins combining to contain more than 34,000 acres of wetland areas at risk. The majority of this acreage, more than 20,000 acres, is found in TB 6 of the Imperial River Basin.

Of the five most highly ranked tertiary basins with respect to wetland area at risk, all are also priority basins with respect to total annual phosphorus loading and total annual nitrogen loading, and all except TB 1 of the Barrier Islands Basin are also priority basins with respect to total suspended solids loading, urban runoff discharge, and agricultural runoff discharge.

| Table 2-11. Relative ranks of the top 25% of the tertiary basins within the Estero Bay Watershed for wetland area at risk. | | | | | | |
|---|----------------|--------------|------------------|-------------------------|-----------------------------|------|
| Secondary Basin | Tertiary Basin | Area (acres) | % Urban Land Use | % Agricultural Land Use | Wetland Area at Risk (acre) | Rank |
| Imperial River | 6 | 41568 | 3 | 25 | 20403 | 1 |
| Barrier Islands | 1 | 15726 | 13 | 0 | 4362 | 2 |
| Estero River | 8 | 27647 | 16 | 27 | 3970 | 3 |
| Estero River | 6 | 7467 | 15 | 27 | 2765 | 4 |
| Six-Mile Cypress Slough | 4 | 18354 | 20 | 23 | 2631 | 5 |
| Cow Creek | 6 | 3906 | 2 | 0 | 2363 | 6 |
| Hendry Creek | 1 | 2469 | 5 | 0 | 1605 | 7 |
| Mullock Creek | 1 | 2973 | 18 | 6 | 971 | 8 |
| Estero River | 1 | 1278 | 0 | 0 | 898 | 9 |
| Hendry Creek | 2 | 1139 | 25 | 0 | 601 | 10 |
| Six-Mile Cypress Slough | 2 | 934 | 23 | 3 | 572 | 11 |
| Ten-Mile Canal | 9 | 1266 | 53 | 24 | 537 | 12 |
| Spring Creek | 1 | 2527 | 35 | <1 | 507 | 13 |
| Cow Creek | 1 | 810 | 7 | 0 | 504 | 14 |
| Ten-Mile Canal | 8 | 1441 | 11 | 42 | 417 | 15 |
| Imperial River | 4 | 4695 | 30 | 37 | 403 | 16 |

The area-weighted rankings of the tertiary basins within the Estero Bay Watershed show that the top-ranked tertiary basin is TB 1 in the Estero River Basin, with more than 70% of the area of the tertiary basin classified as wetland area at risk. The top six ranked tertiary basin for area-weighted wetland areas at risk all have more than 60% of the areas of the basins composed of wetland area at risk. The wetland areas at risk area-weighted high priority tertiary basin are from all the secondary basins with the exception of the Barrier Islands and the Spring Creek basins.

| Table 2-12. Relative ranks of the top 25% of the tertiary basins within the Estero Bay Watershed for area-weighted wetland area at risk. | | | | | | |
|---|----------------|--------------|------------------|-------------------------|---------------------------------|------|
| Secondary Basin | Tertiary Basin | Area (acres) | % Urban Land Use | % Agricultural Land Use | Wetland Area at Risk Percentage | Rank |
| Estero River | 1 | 1278 | 0 | 0 | 70.27 | 1 |
| Cow Creek | 3 | 121 | 18 | 0 | 66.12 | 2 |
| Hendry Creek | 1 | 2469 | 5 | 0 | 65.01 | 3 |
| Cow Creek | 1 | 810 | 7 | 0 | 62.22 | 4 |
| Six-Mile Cypress Slough | 2 | 934 | 23 | 3 | 61.24 | 5 |
| Cow Creek | 6 | 3906 | 2 | 0 | 60.50 | 6 |
| Hendry Creek | 2 | 1139 | 25 | 0 | 52.77 | 7 |
| Imperial River | 6 | 41568 | 3 | 25 | 49.08 | 8 |
| Cow Creek | 5 | 548 | 46 | 0 | 45.26 | 9 |
| Ten-Mile Canal | 9 | 1266 | 53 | 24 | 42.42 | 10 |
| Hendry Creek | 3 | 548 | 1 | 0 | 41.97 | 11 |
| Cow Creek | 4 | 132 | 74 | 0 | 37.88 | 12 |
| Six-Mile Cypress Slough | 7 | 876 | 11 | 3 | 37.33 | 13 |
| Estero River | 6 | 7467 | 15 | 27 | 37.03 | 14 |
| Six-Mile Cypress Slough | 5 | 653 | 14 | 29 | 36.45 | 15 |
| Mullock Creek | 1 | 2973 | 18 | 6 | 32.66 | 16 |

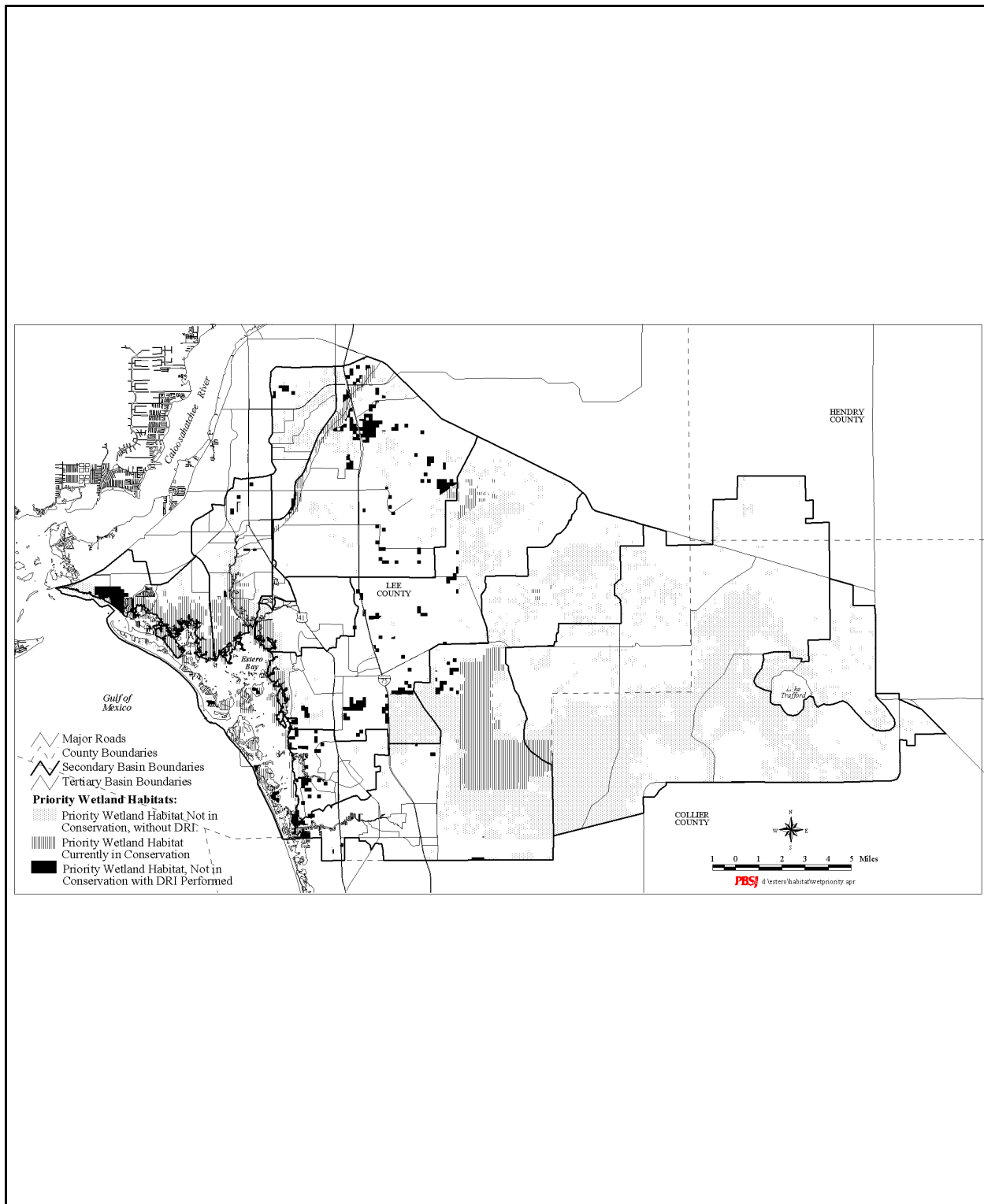


Figure 2-11. Tertiary basins classified by wetland area at risk.

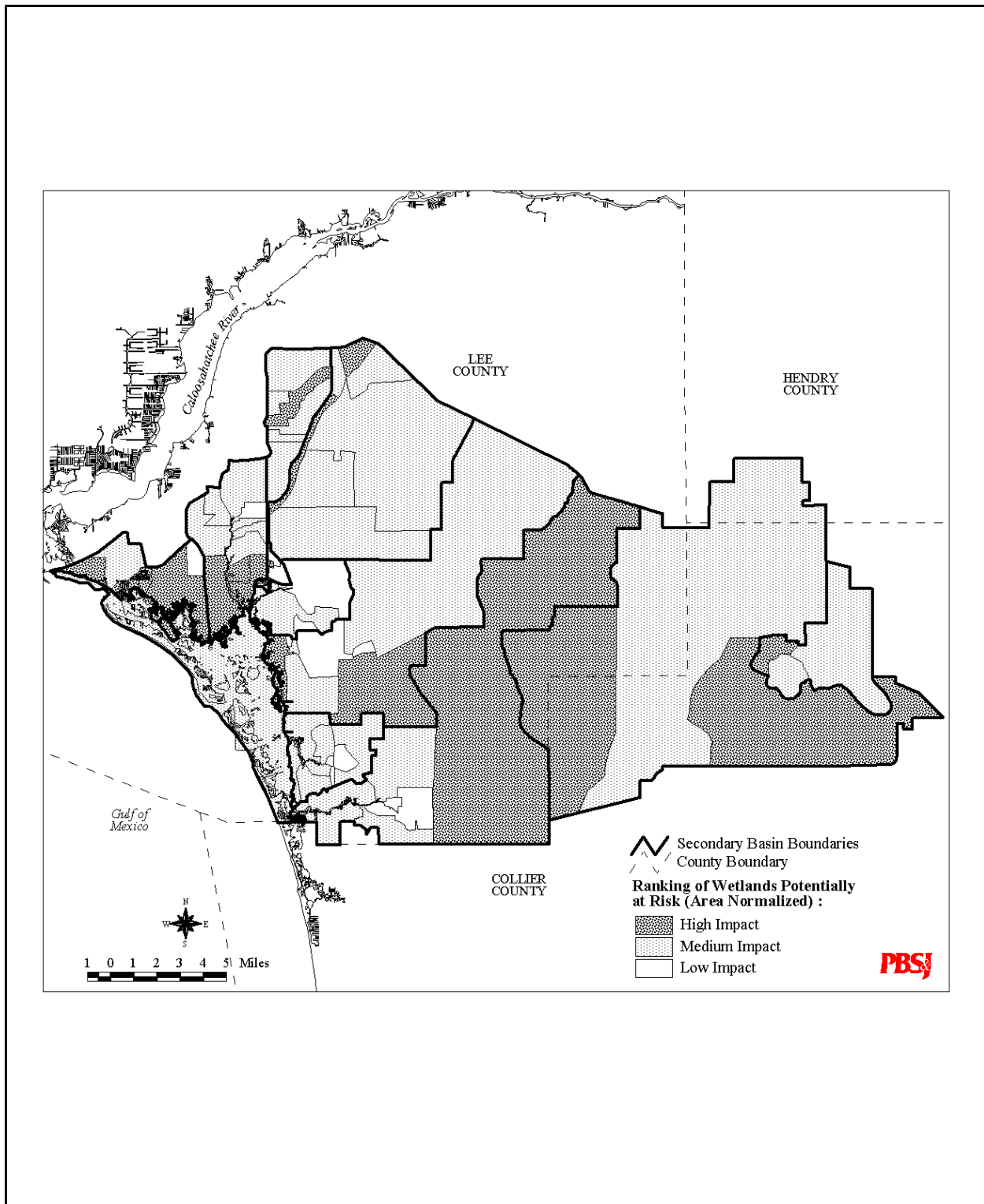


Figure 2-12. Tertiary basins classified by area-weighted wetland area at risk.

